Title (en)

CURVE GENERATION IN A DISPLAY SYSTEM

Publication

EP 0288720 A3 19900131 (EN)

Application

EP 88104225 A 19880317

Priority

GB 8710325 A 19870430

Abstract (en)

[origin: EP0288720A2] A curve generator for a display system comprises arc generation means for generating an arc 10 of a circle 14 from data defining the locations of two end points P1 and P3 and an intermediate point P2 on the arc. The arc generation means comprises initialisation means 40 for calculating the angle subtended between a first vector 21, from a first of the end points P1 to the intermediate point P2, and a second vector 32, from the second of the end points P3 to the intermediate point P2, and arc plotting means 44 for defining a succession of further vectors n1 from said first end point P1 and for calculating, for each further vector, its point of intersection Pn with a counterpart vector 3n, from said second end point P3, with which it subtends said angle, whereby a succession of further points Pn are plotted on the circular arc. The plotting logic thus plots the points of the arc with respect to a given point on the arc itself by generating vectors from that given point and enables the computation of the arc to be performed substantially within the system co-ordinate space in which the arc exists, which reduces the number of places of accuracy needed in order to accurately compute the arc.

IPC 1-7

G09G 1/14; G09G 1/08

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G06T 11/00 (2006.01); **G06T 11/20** (2006.01); **G09G 1/08** (2006.01); **G09G 5/20** (2006.01)

CPC (source: EP US)

G09G 1/08 (2013.01 - EP US); **G09G 5/20** (2013.01 - EP US)

Citation (search report)

- [AD] COMMUNICATIONS OF THE ACM, vol. 20, no. 2, February 1977 BRESENHAM "A linear Algorithm for Incremental Digital Display of Circular Arcs" pages 100-106
- [AD] FOLEY & VAN DAM "Fundamentals of Interactive Computer Graphics" pages 442-446

Cited by

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DE FR GB

DOCDB simple family (publication)

EP 0288720 A2 19881102; **EP 0288720 A3 19900131**; **EP 0288720 B1 19930714**; CA 1309523 C 19921027; DE 3882269 D1 19930819; DE 3882269 T2 19940217; GB 2204216 A 19881102; GB 2204216 B 19910206; GB 8710325 D0 19870603; JP H0677265 B2 19940928; JP S63276183 A 19881114; US 4835722 A 19890530

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